REMARKS

Reconsideration and allowance of this application are respectfully requested. Claims 1, 7 and 14 have been amended.

In particular, Applicant amends claims 1 and 7 to include the element "wherein, when the list of the fragment look-up table is not accessed during a predetermined time, the list is removed from the fragment look-up table." Claim 14 has been amended to place into independent form.

New claims 18 and 19 have been added to correspond to claims 12 and 13 respectively, which were previously canceled by the Amendment filed November 5, 2008.

Claims 1-11 and 14-19 are now pending in the application. The rejections are respectfully submitted to be obviated in view of the amendments and remarks presented herein.

I. Prior Art Rejections

Claims 1-11 and 14-16 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Crow et al. (U.S. Patent Publication No. 2002/0161915 A1; hereinafter "Crow") and Ganesan et al. (U.S. Patent Publication No. 2003/0069973 A1 "Ganesan") in view of Varma et al. (U.S. Patent Publication No. 2004/0037302 A1 "Varma") and in further view of Rana et al. (U.S. Patent Publication No. 2002/0095512 A1 "Rana").

Applicant respectfully traverses these grounds of rejection at least in view of the following exemplary comments.

Claim 1 recites *inter alia* "if the received packet is the first fragment packet, looking-up a tunnel ID of the received packet and a fragment ID of the received packet, and comparing the result of the looked-up fragment ID with each list of a fragment look-up table into which the

results of fragment looked-ups for other received packets are entered, to determine if there is a corresponding list; searching an index indicating one of the protocol processors and corresponding to the tunnel ID of the received packet from a tunnel ID look-up table, and if the list corresponding to the result of the looked-up fragment ID exists in the fragment look-up table, entering the index into the corresponding list of the fragment look-up table."

In an exemplary embodiment, subsequent fragment packets that arrive before the first fragment packet are temporarily stored in the fragment buffer with a corresponding fragment ID until the first packet is received. That is, the subsequent fragment packets do not include the tunnel ID. Accordingly, after the first packet has been received, the system looks-up that tunnel ID and searches the index corresponding to that tunnel ID to attach the index as a tag to the subsequent fragment packets. In other words, when the first packet is received, a valid index is input into a corresponding list of the fragment look-up table.

Specifically, in an exemplary embodiment, the system looks-up the fragment ID and searches the fragment ID to determine whether there is a list corresponding to this fragment ID (*i.e.*, if there are subsequent fragment packets that were received before this first packet). The packets are then transmitted to a protocol processor without reassembly *i.e.*, since each fragment now has a tag *i.e.*, a valid index.

It will be appreciated that the foregoing remarks relate to the invention in a general sense, the remarks are not necessarily limitative of any claims and are intended only to help the Examiner better understand the distinguishing aspects of the claim mentioned above.

The Examiner acknowledges that Crow and Ganesan do not disclose or suggest the above-noted unique features of claim 1. The Examiner, however, alleges that Varma cures the above-identified deficiencies of Crow and Ganesan. The Examiner alleges that Varma discloses

searching a corresponding list in order to update various pointer values for the linked list and maintain fragment count. The Examiner further alleges that the fragment ID of each received fragment has to be compared with the fragment ID in the control memory to be able to update corresponding fragment count and the pointers in the link memory (*see* pages 29-30 of the Office Action dated August 5, 2008). The Examiner's position is not understood.

Applicant respectfully maintains that Varma does not disclose or suggest searching if a corresponding list exists when the first fragment is received. In Varma, it is clear that when the data is received for the empty queue, no searches are performed. That is, if a queue is empty, there is no need to search for an existing list.

Furthermore, in Varma, there is no disclosure or even remote suggestion that the first packet fragment is received after the other packet fragments. However, even assuming *arguendo* that the first packet fragment is one of the subsequently received fragments, there is no need to search for an existing list (queue) as one clearly exists. In other words, updating pointers in the list cannot disclose or suggest searching to determine if a corresponding list exists or is present. In Varma, there is no disclosure or suggestion of searching to determine whether or not the queue *exists*.

In short, Varma does not disclose or suggest if the data is the first data, searching to determine if there is a corresponding list of other received packet fragments. Varma does not disclose or even remotely suggest determining if there is a corresponding list when the first data block is received.

In addition, in Varma, when the first block is received, there is no disclosure or even remote suggestion to look for other received packets at least because the data received is the first block that is assigned the head and tail pointers and as such there are no other data blocks yet. In

Varma, there is no disclosure or suggestion of fragment IDs. Accordingly, the Examiner's rebuttal is technically inaccurate as it is not based on Varma's disclosure.

In short, Varma clearly does not disclose or suggest that if the first fragment packet is received, comparing fragment ID to determine if there exists a corresponding list with other received packets for this fragment ID. Rana does not cure the above-identified deficiencies of Crow, Ganesan, and Varma.

With respect to the Rana reference, in response to Applicant's arguments, the Examiner alleges that session ID corresponds to the index set forth in claim 1 (*see* page 11 of the Office Action). Applicant respectfully disagrees.

Rana discloses the packet assembler uses unique fields in the data packet to access a session ID, which is used to associate the data packet with a particular traffic flow over the network. The session ID allows each data packet to be assigned to a traffic flow so sequence numbers can be used to anticipate the next data packet and out of order packets can be identified. Out of order packets are sent to a reordering unit, which reorders the data packets by modifying links to the packet memory. Rana discloses that a session ID is assigned to the first data packet for a new session, and each subsequent packet in the session is associated with that session ID.

Nowhere, however, does Rana disclose entering an index into the corresponding list. In Rana, a session ID is simply assigned to the first data packet and subsequent data packets. In Rana, there is no disclosure or suggestion of the index being valid (when the first packet was already received) and not valid (when the first packet is not yet received). In other words, in Rana, there is no disclosure or suggestion of entering a session ID. In Rana, the session ID is automatically assigned to each packet.

That is, the session ID is not assigned when the list corresponding to the result of the looked-up fragment ID exists in the fragment look-up table. In Rana, the session ID is assigned to the first and subsequent packets without checking whether a particular condition (*i.e.*, if the list corresponding to the result of the looked-up fragment ID exists in the fragment look-up table) *is valid.* In short, Rana does not disclose or even remotely suggest assigning an index to the packets stored in the corresponding list when the first packet is received. In Rana, there is no disclosure or suggestion of the index of subsequent packets being invalid *prior to receipt of the first packet.*

Therefore, "if the received packet is the first fragment packet, looking-up a tunnel ID of the received packet and a fragment ID of the received packet, and comparing the result of the looked-up fragment ID with each list of a fragment look-up table into which the results of fragment looked-ups for other received packets are entered, to determine if there is a corresponding list; searching an index indicating one of the protocol processors and corresponding to the tunnel ID of the received packet from a tunnel ID look-up table, and if the list corresponding to the result of the looked-up fragment ID exists in the fragment look-up table, entering the index into the corresponding list of the fragment look-up table," as set forth in claim 1 is not disclosed by the combined disclosure of Crow, Ganesan, Varma, and Rana. Together, the combined teachings of these references would not have and could not have rendered obvious the unique features of claim 1.

In addition, independent claim 1 also recites "wherein, when the list of the fragment look-up table is not accessed during a predetermined time, the list is removed from the fragment look-up table." Therefore, if the transmissions of the corresponding fragments are entirely completed, or some of the fragments are lost during the transmissions, it may be possible to prevent the

resources of the fragment look-up table storage unit from being consumed due to the invalid list. **However, none of Crow, Ganesan, Varma, and Rana, either alone *or in combination*, disclose or suggest removing the list when a list of a fragment look-up table is not accessed during a predetermined time.**

For at least these exemplary reasons, claim 1 is patentable over Crow in view of Ganesan, Varma, and Rana. Claims 2-6 and 14-16 are patentable at least by virtue of their dependency on claim 1 as well as for their additionally recited elements.

Next, independent claim 7 recites features similar to, although not necessarily coextensive with, the features argued above with respect to claim 1. Therefore, arguments presented with respect to claim 1 apply with equal force here. For at least substantially analogous exemplary reasons, therefore, independent claim 7 is patentable over Crow, Ganesan, Varma, and Rana, either alone *or in combination*. Claims 8-11 are patentable at least by virtue of their dependency on claim 7 as well as for their additionally recited elements.

Lastly, independent claim 14 recites features similar to, although not necessarily coextensive with, the features argued above with respect to claim 1. Therefore, arguments presented with respect to claim 1 apply with equal force here. For at least substantially analogous exemplary reasons, therefore, independent claim 14 is patentable over Crow, Ganesan, Varma, and Rana, either alone *or in combination*. Claim 15 is patentable at least by virtue of its dependency on claim 14 as well as for their additionally recited elements.

Reconsideration and withdrawal of the rejection under 35 U.S.C. § 103(a) are respectfully requested.

Claim 17 has been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Crow in view of Ganesan and further in view of Varma and further in view of Rana and further in view of Hui et al. (U.S. Patent Application Publication #2004/0151197 A1; "Hui").

As discussed above, claim 1 is patentable over Crow in view of Ganesan, Varma, and Rana. The Examiner has relied upon Hui only for the alleged teaching in paragraph [0017] of setting an index to invalid. However, Hui also fails to teach or suggest either

> "if the received packet is the first fragment packet, looking-up a tunnel ID of the received packet and a fragment ID of the received packet, and comparing the result of the looked-up fragment ID with each list of a fragment look-up table into which the results of fragment looked-ups for other received packets are entered, to determine if there is a corresponding list; searching an index indicating one of the protocol processors and corresponding to the tunnel ID of the received packet from a tunnel ID look-up table, and if the list corresponding to the result of the looked-up fragment ID exists in the fragment look-up table, entering the index into the corresponding list of the fragment look-up table,"
>
> or
>
> "wherein, when the list of the fragment look-up table is not accessed during a predetermined time, the list is removed from the fragment look-up table,"

as set forth in claim 1.

Accordingly, none of Crow, Ganesan, Varma, Rana, and Hui, alone *or in combination*, teach or suggest every element as recited by claim 1. Claim 1 is thus patentable over the cited references. Claim 17 is patentable at least by virtue of its dependency on claim 1 as well as for its additionally recited elements.

Reconsideration and withdrawal of the rejection under 35 U.S.C. § 103(a) are respectfully requested.

II. Newly Added Claims

Newly added dependent claims 18 and 19 are also patentable, in view of the cited references, at least by virtue of their dependencies as well as for their additionally recited elements.

III. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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